

**BLUEWATER SPRINGS HATCHERY RACEWAY COVER**  
**MONTANA DEPARTMENT OF FISH, WILDLIFE, AND PARKS**  
**FWP PROJECT NO. 7213552**  
**SPECIAL PROVISIONS**

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## **SP-1 SPECIFICATIONS AND CONTRACT DOCUMENTS**

The Bidding Requirements, Contract Forms, Conditions of the Contract, Standard General Conditions, and Specifications governing this contract are the Montana Public Works Standard Specifications (MPWSS), Seventh Edition, April 2021.

## **SP-2 GENERAL**

The following special provision items are included to supplement the standard specifications and to clarify items specific to this contract. These provisions are part of the overall specifications and, as such, shall be regarded in a like manner during the bidding process and during the construction phase. If a conflict, discrepancy, contradiction, or inconsistency occurs between the Specification and the Drawings, resolution shall be as specified in Article 1 of the General Provisions.

Contractor shall coordinate all construction activities through all phases of the project, the intent being to complete the proposed construction in a neat orderly fashion, in a timely manner, and with a minimum of disturbance to neighbors and the traveling public.

The Contract Drawings consist of 10 sheets. Each sheet bears the following general title: Montana Dept of Fish, Wildlife and Parks, Bluewater Springs Hatchery, Raceway Cover Project.

Contractor shall construct project only using plan sheets marked "Issued for Construction".

## **SP-3 PROJECT DESCRIPTION**

This project consists of construction of a structural steel cover and enclosure for one of the raceways at the fish hatchery.

## **SP-4 SCHEDULING**

The Notice to Proceed for this project is September 16, 2024 to be completed by March 14, 2025. Liquidated damages will be assessed as per specifications herein.

Prior to or at the Preconstruction Conference, the Contractor shall provide the Engineer/Owner with a practicable Construction Progress Schedule showing the order, timing, and progress in which the Contractor proposes to complete the work.

This schedule shall be in bar graph, CPM, or PERT format. The schedule shall be updated and resubmitted with each application for payment requested.

## **SP-5 PAYMENT AND PERFORMANCE BONDS**

Payment and Performance Bonds are required per the General Conditions.

## **SP-6 CERTIFICATE OF INSURANCE**

Insurance coverage shall be per the General Conditions.

## **SP-7 PREVAILING WAGE RATES**

All work performed under this contract shall be paid per General Conditions 3.4, Labor, Wages, and Materials.

## **SP-8 PAYMENT OF CHANGE ORDERS**

Additional work, above and beyond the original contract work will not be paid for without a signed change order or contract amendment signed by the Owner prior to the start of any work. Change orders shall be in accordance with Article 7.2 of the General Conditions.

A reconciling change order showing final in-place quantity over-runs and under-runs will be prepared before the final payment to the Contractor. The unit prices will remain unchanged. This reconciling change order shall be prepared before authorization of final payment to the Contractor.

## **SP-9 ADVERSE WEATHER SHUTDOWN**

The Contractor is advised that should the Contractor request an adverse weather shutdown and should such a shutdown be approved by the Engineer/Owner, all work on the project shall cease. The Engineer will not be available for work inspection during such shutdowns and any work completed by the Contractor during such a shutdown will not be accepted by the Engineer.

In no case will an adverse weather shutdown be approved by the Engineer until all temporary services have been restored.

During adverse weather shutdown, Contractor must maintain storm water management facilities in accordance to the Montana Water Quality Act and in accordance to Montana Department of Environmental Quality, and maintain all temporary roads and walkways.

This project is less than one acre in size and therefore will not require a Notice of Intent and SWPPP Permit. Contractor must install and maintain BMP (Best Management Practices) devices to prevent stormwater from leaving the construction area. Cost of installing and maintaining BMPs is considered incidental and will be included with other items.

## **SP-10 BASIS OF PAYMENT**

The bid items included in the Bid Form include all items, which will receive payment under this contract. Additional work described in the Contract Documents or shown on the Plans, which is not specifically listed in the Bid Form, shall be considered incidental to the closest associated Bid Item.

The basis for payment shall be as abbreviated on the Bid Form and defined below:

LS = Lump Sum; EA = Each; LF = Linear Feet; VF = Vertical Feet; CY = Cubic Yard;  
SY = Square Yard; SF = Square Feet; TN = Ton; GL = Gallon

At project completion, adjustments to quantities will be made based on actual amounts installed. Adjustments will not be made for Lump Sum items unless the scope of work is substantially changed during construction as determined by the Engineer. The Engineer shall have final authority in determining if the scope of work has substantially changed. If scope of work must be changed due to negligence or fault of the Contractor, additional payment for Lump Sum items shall not be made. Quantity adjustments to all non-lump sum items shall be measured by the Engineer in the presence of the Contractor. Payment for each item shall be for the finished product including all labor, materials, equipment, overhead, profit and any other miscellaneous items unless otherwise noted in the Contract Documents.

Mobilization and Insurance Bid Items . These items include the mobilization of equipment to the site, insurance and bond costs and demobilization. Payment for Mobilization and Insurance Bid Items shall be made as follows. Sixty (60) percent of the total item shall be paid with the first application for payment. The remaining forty (40) percent of the total shall be paid with the first application for payment that is submitted to the Engineer after the Certificate of Substantial Completion has been signed by the Engineer and the Owner.

Partial Payments of Lump Sum Bid Items. Payment for all lump sum items shall be made on the basis of percent of work complete on individual items at the time the Contractor submits the Application for Payment to the Engineer except as stated herein. If required by the Engineer, the Contractor shall provide evidence of percent of work complete. The percent of work shall then be determined by the judgment and calculations of the Engineer.

#### **SP-11 LIMITS OF CONSTRUCTION**

The Contractor is required to confine construction activities within the area of construction activity as shown on the plans.

Open space, vacant lots, or undeveloped land shall not be considered for Contractor use unless the Contractor obtains separate temporary easements. Said separate temporary easements shall be in writing executed by the property owner of said land and an executed copy shall be filed with the Owner and the Engineer, prior to Contractor occupancy of land.

Unless specifically designated for removal, all trees and other improvements in or adjacent to easements and rights-of-way shall not be touched, trimmed or injured. All restoration outside the limits of the construction areas shall be at the Contractor's expense.

#### **SP-12 STAGING AREA**

The staging area for this project shall be coordinated with the management of the hatchery. Contact the **Hatchery Manager**, (406)668-7443.

#### **SP-13 CONSTRUCTION ACCESS**

The Contractor may access the site via Bluewater Road. The Contractor shall provide temporary access as required, but shall restore the site to its original condition. Any damage to existing roadways or existing facilities will be repaired at the Contractor's expense.

#### **SP-14 PRESERVATION AND REPAIR BY CONTRACTOR**

The Contractor shall be responsible for the preservation of existing paved and gravel street sections and concrete driveways which are not to be disturbed by construction. The Contractor is hereby cautioned that any damage done in any paved or gravel service road or concrete driveway, due to any construction or travel operations (hauling, storage, unloading, etc.), shall be repaired and/or replaced at Contractor's expense, and to the satisfaction of the Owner. The Contractor shall familiarize themselves with the existing sections in the area and consider self-imposed load restrictions conforming to those sections. All access roads and driveways shall be kept free and clear of all mud, gravel, debris, etc., during the project. There will be no additional payment to the Contractor for the cleaning and sweeping of all access roads and driveways.

#### **SP-15 CONTRACTOR'S SUPERINTENDENT**

The Contractor will be required to have a full-time resident General Superintendent on the project at all times while the work is in progress. The General Superintendent shall be knowledgeable and qualified to evaluate the quality of not only the general construction work but especially the systems and installations of subcontract work.

The General Superintendent shall:

- Aggressively evaluate on a day-to-day basis and be responsible for the quality and acceptability of all work.
- Make the first determination as to the fitness and compliance of all work performed.
- Be the initiator in regard to rejection of unfit work.
- Not passively default or abdicate, in the first analysis, these duties to the Architect/Engineer or to the Owner.

The General Superintendent shall be in a position to direct the work and make decisions either directly or through immediate contact with General Superintendent's superior. Absence or incompetence of the General Superintendent shall be reason for the Owner to stop all work on the project.

The General Superintendent or Contractor's designated representative shall maintain, at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, manufacturer's catalog number of equipment supplied, and other data as required to provide the Owner with an accurate "as-constructed" set of Drawings. An approval by the Engineer shall not be given on the final payment request until complete record drawings are submitted to the Engineer.

### **SP-16 CONTRACTOR WORK HOURS**

The schedule for this project has been figured on the basis of the Contractor working five days a week (Monday through Friday, excluding legal holidays), eight (8) hours a day. Should the Contractor and/or Contractor's subcontractor(s) desire to work more than five (5) days per week or more than eight (8) hours per day, then approval to do so must be obtained from the Engineer/Owner. If the additional work hours result in costs above and beyond the Engineer's contract fees, the actual cost of the additional Engineer's services will be the responsibility of the Contractor and will be deducted from the Contractor's application for payment. These costs shall not be considered a part of the liquidated damages.

No work shall be done between the hours of 8:00 p.m. and 6:00 a.m., nor on Saturdays, Sundays, or legal holidays, without the written approval of the Owner. However, work necessary in case of emergencies or for the protection of equipment or finished work may be done without the Owner's approval.

### **SP-17 CONTRACTOR RESPONSIBILITIES**

The Contractor shall be responsible for obtaining all permits as required by local government agencies.

The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Agreement. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the work.

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Agreement. At completion of this work, the Contractor shall remove from and about the project waste materials, rubbish, tools, construction equipment, machinery and surplus materials.

To the fullest extent of the Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer from and against all claims, costs, damages, losses and expenses, including, but not limited to, attorney's fees arising out of or resulting from performance of the work caused in whole or in part by negligent acts or omissions of the Contractor, subcontractor(s), anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

The Contractor shall coordinate all phases of the work with Owner's use of the site to minimize or avoid conflict, protect all existing work adjacent to new construction, and repair any damage and leave premises in original condition, except where otherwise specified by the Engineer. Contractor agrees to attend or be represented at weekly team meetings during the term of the project to assure coordination with the other project participants.

#### **SP-18 COORDINATION WITH THE OWNER**

The Contractor shall conduct a weekly meeting each week of construction per mutual agreement in order to coordinate the construction activities of the Contractor and the Fish Hatchery employees duties concerning the maintenance and operations required for the raceway and fishery. The Fish Hatchery employees shall have access at all times to the raceway.

#### **SP-19 GROUNDWATER CONSIDERATION**

The Contractor is advised that groundwater may be present at the project site. The Contractor is responsible for providing dewatering equipment and methods for this project if necessary.

The Contractor shall be responsible for arrangements of permits and obtaining of sites of groundwater discharge or flushing discharge. This shall include all cleanup, restoration, etc., of any discharge areas. No claims for any of the above-related work shall be submitted to the Owner.

#### **SP-20 TEMPORARY FACILITIES**

Water, power, and toilet facilities are available at the job site with approval of the owner. The Contractor shall provide, at Contractor's expense, temporary water, power, heat, and toilet facilities, as required.

The Contractor shall design, construct, and maintain miscellaneous services and facilities as needed to accommodate performance of the work, including temporary stairs, ramps, ladders, staging, shoring, scaffolding, temporary partitions, waste chutes, sidewalk bridge/walkway, and similar items.



## **SP-21 SITE GRADING**

Excess material generated from excavation will be distributed throughout the site as directed by the Engineer/Owner or shall be disposed of across Bluewater Road at a site within the property designated by the hatchery management. Excess material shall be graded and blended into the surrounding topography to provide a natural appearance to the finished grade of the project. The placement and grading of this material shall be considered incidental.

## **SP-22 DUST CONTROL**

The Contractor shall provide dust abatement for all roads and work areas and prevent dust from becoming a nuisance to adjacent properties. There will be no payment for dust control as a separate bid item and this work is considered incidental and at the Contractor's expense.

## **SP-23 WATER FOR CONSTRUCTION PURPOSES**

Construction water required for compaction of embankments, gravel courses, or any other construction related work must be supplied by the Contractor at Contractor's expense.

## **SP-24 UNDERGROUND UTILITY CROSSINGS**

The Contractor shall be responsible for checking with the owners of the underground utilities such as the power, gas, and telephone companies, etc., as to the location of their underground installations in the project area. The Contractor shall be solely responsible for any damage done to these installations due to failure to locate them or to properly protect them when their location is known.

It shall be solely the responsibility of the Contractor to fully coordinate Contractor's work with the agencies and to keep them informed of Contractor's construction activities so that these vital installations are fully protected at all times.

A Montana One-Call system (1-800-424-5555) has been established to facilitate requests for underground facility location information. The Contractor is cautioned that all utilities may not be on this system.

The Contractor shall have full agreement and understanding with the affected utility companies on what the existing conditions are and what will be necessary to be changed for the Contractor's construction. The Contractor will obtain any permits, agreements, or insurance required. No separate measurement and payment shall be made for this item, unless specifically noted. All costs shall be considered an integral part of and be included in the price bid for pipe complete-in-place.

A Hatchery Utility Map is included in the plans for informational purposes only. It is still the contractor's responsibility to insure the location of all utilities.

Existing Electrical Line. The Hatchery Utility Map, Plan Sheet 10, shows the location of two outlet boxes located on the north and south side of the raceway. The underground electric power line to these boxes as shown is in conflict with the NE corner drilled shaft footing. This line will be disconnected prior to the project contract award. The contractor shall reconnect and reroute this underground electric power line to the outlet boxes after the NE corner drilled shaft footing has been installed. This work shall be performed by a Montana licensed electrical contractor. The basis of payment for this work will be included in the lump sum bid for Relocate Underground Electrical Line.

#### **SP-25 SIGNS, SIGN POSTS, AND UTILITY POLES**

All existing signs, sign posts and utility poles determined to be in the path of the work zone shall be temporarily removed and later replaced in their previous location. The conditions of MPWSS Section 02114 shall apply to this section with the exception that there shall be no separate measurement and payment for this item.

#### **SP-26 SECURING WORK AREAS AND PEDESTRIAN TRAFFIC**

The Contractor is reminded of the importance of securing all work areas during and after construction work hours to prevent pedestrian access. Costs associated shall be considered incidental to the work with no separate payment for this item.

#### **SP-27 CONSTRUCTION STAKING**

The Contractor is responsible for providing construction staking for measurements, lines, locations and grades necessary for construction. All construction staking shall be performed under the responsible charge of a land surveyor licensed in the State of Montana and by a party chief or engineering technician experienced in construction layout and staking techniques as are required by the specific type of work being performed.

Payment for construction staking shall be considered incidental to the work and is to be covered under other bid items of the project.

#### **SP-28 COMPACTION REQUIREMENTS**

All earthwork and gravel shall be compacted to 95 percent of maximum dry density as determined by the standard proctor method ASTM (D-698).

#### **SP-29 MATERIALS TESTING AND CONTROL**

A. The following materials and control tests shall be made by a third party materials testing company to determine the Contractor's compliance with the specifications:

1. Compressive strength tests, air volume, and slump for the concrete delivered to the project per each day of which concrete is placed.

The periodic tests made by the third party materials testing company for the Contractor's production may serve as the basis for rejecting completed work as unacceptable. The above tests - paragraphs A.1 - shall be the responsibility of the Contractor and shall be included in the costs of other items,

B. The costs of the following tests shall be paid for by the Contractor:

1. Any tests the Contractor requires to control Contractor's construction operations.
2. Test failure.
4. Any additional tests required to verify acceptable quality of supplied materials.

C. Acceptance and rejection of materials will generally be determined from tests made of the various courses complete and in-place in the field. While the Engineer may, during course of construction, make tests at the source or point of production; it is the responsibility of the Contractor to conduct, control and test Contractor's production operations in such a manner that the materials produced will meet the specification requirements.

Contractor shall be responsible for all quality control testing.

### **SP-30 TECHNICAL SPECIFICATIONS**

Technical specifications have been included in the Contract Documents and are incorporated by reference. The attached technical specifications shall be considered a part of these Special Provisions in determining precedence of the Contract Documents.

### **SP-31 SHOP DRAWINGS AND SUBMITTALS**

Shop drawings or submittals shall be submitted for all materials used in the project including, but not limited to the following:

- A. Structural Steel Design, Plans, and Certifications
- B. Concrete Mix Design
- C. Reinforcing Steel Mill Certifications

### **SP-32 EXPLANATION OF BID ITEMS**

The following items are intended to clarify the scope of the following Bid Items, but are to be considered supplemental to the rest of the Contract Documents and not necessarily all inclusive of items, which must be completed for payment of each Bid Item.

Bid Item No. 101 – Mobilization (Lump Sum). This bid item shall include the costs associated with mobilizing equipment to the project site, insurance, bond costs, permitting, submittals, and

demobilization. Measurement and payment will be by lump sum (LS). Sixty (60) percent of the total item shall be paid with the first application for payment. The remaining forty (40) percent of the total shall be paid with the first application for payment submitted after the Certificate of Substantial Completion has been signed by the Owner.

Bid Item No. 102 – Reinforced Concrete (Cubic Yard). This bid item includes the drilled shaft excavation; reinforcing steel; and concrete to complete the substructure units. Measurement and payment will be by the cubic yard (CY). Basis of payment will be the plan concrete quantity required as per the plan drawings or per the engineer’s revised drilled shaft plan.

Bid Item No. 103 – Structural Steel (Lump Sum). This bid item includes the design; fabrication; shipping to the site; storage at the site; erection of the cover; and any materials and equipment necessary to complete the item. See SP-33 for special provision for this item. Measurement and payment will be by lump sum (LS). Fifty (50) percent of the total item shall be paid with the delivery of all the materials required to erect the structural steel cover. The remaining fifty (50) percent of the total shall be paid with the first application for payment submitted after the Certificate of Substantial Completion has been signed by the Owner.

Bid Item No. 104 – Chain Link Fence (Square Feet). This bid item includes the materials and labor to erect the chain link fence around the perimeter of the cover per Sp-35. Measurement and payment will be by the Square Feet (SF). Basis of payment will be the actual measured quantity required to enclose the perimeter of the cover.

Bid Item No. 105 – Roll Up Door (Each). This bid item includes the furnishing and installation of the Roll Up Doors. Measurement and payment will be per each door installed.

Bid Item No. 106 – Chain Link Gate (Each). This bid item includes the furnishing and placement of the chain link gates as shown on the plans. Measurement and payment will be per each gate installed.

Bid Item No. 107 – Relocate Underground Electric Line. This bid item includes the furnishing, placing, and labor to complete the relocation of the underground electric line as shown on the plans. Measurement and payment will be by lump sum (LS).

### **SP-33 REINFORCED CONCRETE**

A. Description. This work is the drilling of the shaft, reinforcing steel, concrete, anchor bolts, and equipment and labor to install the drilled shaft footing. The size of the drilled shaft footing is based on estimated loading conditions calculated during the planning of the project and soil conditions shown in the core logs. The size of the drilled shaft footing may require adjustment after receiving the final design information and plans from the steel fabricator. The size and number of the anchor bolts will be determined after receiving the final design information from

the steel fabricator. The core logs are included in the back of these Special Provisions for informational purposes only.

#### B. Materials.

**Drilled Shaft Concrete.** Drilled shaft concrete is a highly workable concrete that can flow through dense reinforcement and adequately fill voids without segregation or excessive bleeding without the need for vibration. Drilled shaft concrete should not begin initial set until the placement is complete. Design and produce Drilled Shaft concrete in accordance with the following:

1. Set a target slump that meets the needs of the project. Set the target slump no lower than 8 inches. Do not place drilled shaft concrete having a slump of less than 7 inches.
2. Include with the mix design an estimate of the maximum time from producing the 1st batch of concrete for a shaft to the anticipated completion of that shaft. All concrete used for the drilled shaft must maintain a minimum of a 6-inch slump until 2 hours after the estimated completion.
3. Air entrainment may be used in drilled shaft concrete if needed to reduce bleed water or achieve certain placement properties.
4. The concrete used for the drilled shaft footings shall have a minimum compressive strength of 3000 psi. A mix design shall be submitted to the Owner/Engineer for approval prior to delivery and placing the concrete.

**Reinforcing Steel.** The reinforcing steel shall be new deformed rebar, Grade 60. Mill Certifications shall be submitted with the delivery of the reinforcing steel to the project site.

#### C. Drilled Shaft Construction.

**Shaft Locations, Alignment and Tolerances.** Drill all shafts to the bottom elevations specified on the plans. Construct the shaft so the vertical centerline axis of the finished shaft is within 2 inches of the plan location at the top of the shaft. Drill all shafts to within 2% of vertical the entire depth of the shaft excavation.

**Sloughing and Caving.** Use tools and tool withdrawal rates that will not cause suction effects that result in soil intrusion or instability of the excavation. Use construction methods that will ensure no sloughing or caving of the shaft side walls. In the event any sloughing or caving does occur, remove all sloughed material. Ensure that concrete completely fills the shaft. If caving occurs during placement of drilled shaft concrete, immediately stop the flow of concrete, and undertake corrective measures to completely remove the sloughed materials from the shaft. If necessary, to facilitate material removal, remove the concrete and reinforcing steel already placed in the shaft.

Excavation Stability. Do not use slurry construction methods as an alternative to or in conjunction with temporary casing. Use of temporary casing to facilitate shaft construction and prevent sloughing and caving of the shaft sidewalls is permitted. Place the temporary casing deeper, if necessary, to prevent material from entering the shaft excavation. Use casing with an outside diameter no less than the specified diameter of the shaft. During casing extraction, maintain a sufficient level of fluid in the casing to counteract external hydrostatic pressures. Maintain an adequate level of concrete within the casing to ensure that fluid trapped behind the casing is displaced upward and discharged at the ground surface without contaminating or displacing the shaft concrete. Temporary casings that have become bound or fouled during shaft construction and cannot be removed are considered to be a defect in the drilled shaft. Correct defective shafts using approved methods at no cost to the Department. Corrective action may consist of, but is not limited to, the following:

1. Removing the drilled shaft concrete and extending the drilled shaft deeper to compensate for the loss of frictional capacity to the cased zone.
2. Providing straddle drilled shafts to compensate for capacity loss.
3. Providing a replacement drilled shaft.

Cleaning. Remove all loose or disturbed material from the bottom of the shaft excavation immediately prior to placing reinforcing steel and concrete. After cleaning, no more than 1-inch of loose or disturbed material is permitted in the bottom of the shaft.

D. Method of Measurement. Measurement shall be by the cubic yard.

E. Basis of Payment. Basis of payment will be the plan concrete quantity required as per the plan drawings or per the engineer's revised drilled shaft plan.

### **SP-34 STRUCTURAL STEEL**

Description: This work is the design, furnishing, fabricating, and erecting of the structural steel cover. This will include the girders, columns, girts, purlins, x-bracing, metal roofing, and all materials, equipment, and labor required to complete the erection of the structural steel cover.

Prequalification of Steel Fabricator: Use steel fabricators that are pre-qualified under the AISC Quality Certification Program. All fabrication is performed under the direct supervision of a quality assurance and control manager. Direct supervision means that the quality assurance and control manager is on site during all fabrication performed in the fabrication plant and is responsible for the quality assurance and control activities.

#### Submittals:

A. Fabrication Drawings. Prior to fabricating members, submit fabrication drawings and include the following information:

1. An erection layout with each member assigned a production number.
2. A tentative fabrication schedule.
3. Denote any changes from the details in the contract.
4. All dimensions, geometrical information, details, and other data required for fabrication. Include camber information, blocking diagrams and shop splices. Denote specification, grade, finish, required toughness testing and required surface preparation for all steel plates, shapes, pipes, tubes, bars, and all miscellaneous hardware such as shear studs, bolts, stud bolts, threaded rods, nuts, and washers.
5. A list of field bolts and other items furnished by the fabricator:

Appropriate weld sizes, symbols, requirements for non-destructive testing, heat cambering and bending procedures. Provide welding certifications and welding procedure specifications and any supporting documentation for all welding required for fabrication. Welding Procedure Specification (WPS) identification is required in the weld symbol tail for all weld symbols shown on the shop drawings.

Submit shop drawings and design calculations. Ensure the submittal includes all information required to check the structural accuracy and fabrication procedures for the structure.

Structural shop drawings must be designed and stamped by a professional engineer registered and licensed to conduct engineering in the State of Montana.

Do not begin fabrication until the Engineer/Owner approved drawings are received by the plant.

B. Certificate of Compliance. Furnish a manufacturer's Certificate of Compliance for all bolts, nuts, washers, and load indicator washers. Include documentation that test reports performed on the finished bolt confirming that all of the materials provided meet the requirements of the applicable ASTM specification. The documentation must include the name and address of the test laboratory, the date of testing, lot identification and the sample sizes of bolts and nuts used for each test performed for the certification. Submit the following items before installation:

1. The certification from the supplier showing that all tests required by the ASTM specifications have been performed. Include the date and location of those tests, as well as the production lot numbers, and the sample sizes used for each test performed with the certification.
2. The certification from the supplier that these are Made in the USA products.

#### Bolted Connections.

A. General. Make bolted connections in accordance with the contract requirements.

1. Furnish bolts that are free of rust.
2. Use beveled washers to provide full bearing to the head or nut where bolts are used on beveled surfaces.

B. Unfinished Bolts. Furnish standard unfinished bolts; with nuts having a bolt hole diameter 1/16-inch larger than the bolt diameter. Use threaded bolts, transferring shear, that have no more than one thread within the grip of the metal. Furnish bolts that extend through the nuts a maximum 1/4-inch.

Field Welding. Do not weld temporary construction supports to beams, girders, or other main members. Any member with unauthorized field welds, tack welds, or arc strikes will be rejected.

Assembling Steel. Field assemble steel parts as follows:

Assemble the parts as specified in the fabricator plans and specifications, following the match-marks. Prevent damaging the material while handling. Clean all bearing and member surfaces in permanent contact before assembly.

Splices and field connections must have a minimum of 1/2 of the holes filled with bolts or erection pins before removing temporary supports or releasing the load from erecting equipment. Do not begin production bolt tightening of the field splice bolts until the complete girder line is aligned and erected matching the full camber line.

Marking and Shipping. Paint or mark each member with an erection mark and furnish the Engineer/Owner an erection diagram detailing the erection marks.

Furnish copies of material orders, shipping statements, and erection diagrams. Show the individual member weights on the statements. A shipping statement must accompany the material and be marked to clearly identify it with the delivered material and the relevant domestic material and contract specification certifications. Mark the weight on members weighing 3 tons or more.

Load and unload structural members on trucks or cars without stressing or causing damage.

Pack bolts, loose nuts, or washers of each size separately. Ship pins, small parts, bolts, washers, and nuts in boxes, crates, kegs, or barrels, with the gross weight of each package not exceeding 300 pounds. Plainly mark each shipping container, listing and describing the contents on the outside of each shipping container.

Keep structural material clean and free from damage.

Erection. Submit a steel erection plan and specifications that ensures safety, prevents overstressing of the steel, maintains stability, prevents damage to the work or surroundings, and achieves the proper final geometry. Submit a complete erection plan and specifications for



erection of the steel and for any falsework necessary, including temporary bracing, guywires, or other required items. The erection plan and specifications must bear the signature and the professional seal of a professional engineer licensed to practice in Montana.

Method of Measurement. Structural steel is measured by the lump sum.

Basis of Payment. Basis of payment for the completed and accepted quantities is made under the pay item of Structural Steel, Lump Sum.

Partial payments for structural steel will be made based on the lump sum contract unit price as follows:

1. 50% when the Structural Steel is delivered to the site.
2. 50% with the first application for payment submitted after the Certificate of Substantial Completion has been signed by the Owner.

### **SP-35 CHAIN LINK FENCE**

Description. This work is the furnishing and installation of the materials, labor, and equipment to totally enclose the sides of the perimeter of the cover with chain link fence. The Chain Link Fence details on the plans may change after receiving the Structural Steel Fabricator plans. The estimated quantities should not change. Coordinate the fencing details to be installed with the Fish Hatchery Manager prior to beginning the installation. This item may be accepted or eliminated at the Owner's discretion.

General. Meet AASHTO M 181 requirements, as modified herein. Use one of the following fence fabrics:

- Type 1 Class C zinc-coated steel
- Type 2 aluminum-coated steel
- Type 3 aluminum alloy

Zinc-5% aluminum-mischmetal alloy in accordance with ASTM B750 may be substituted for zinc coating (hot-dipped) at a Class 2, or 1.0 oz/ft<sup>2</sup> (305 g/m<sup>2</sup>), coating thickness as specified by ASTM F1345.

Use zinc-coated steel for all Type 1 and Type 2 fabric fence parts: including posts, rails, gate frames, expansion sleeves, wire ties, fabric ties, hog rings, tension wire, miscellaneous fittings, and hardware.

Use aluminum alloy for these same Type 3 fabric fence parts. Use either zinccoated steel or aluminum alloy for these Type 4 fabric fence parts.

Fence Fabric. Furnish fence fabric having 2-inch openings and in accordance with AASHTO M 181. Use 11-gauge wire for fabric 48 inches high and under. Use 9-gauge wire for fabric 60 inches high and over. The fabric height will be determined by the contractor to fit the openings.

Posts, Rails, and Braces. Meet ASTM requirements. Furnish all posts with a watertight cap that fits securely over the outside post top and supports the top rail. Posts will be attached to the girts installed by the steel fabricator using a connection approved by the Engineer/Owner. No welding will be permitted to the structural main frame. A top and bottom rail will be required for the height of the fence fabric.

Fabric Bands and Stretcher Bars. Furnish bands as follows:

- Steel - a minimum 1/8-inch (3 mm) thick x 1-inch (25 mm) wide.
- Aluminum - a minimum 1/8-inch (3 mm) thick x 7/8-inch (22 mm) wide.

Furnish aluminum or steel stretcher bars as follows:

- A minimum 1/4-inch (3 mm) thick x 3/4-inch (19 mm) wide.
- At least 2 inches (50 mm) shorter than the fabric width used.

Tie Wire. Furnish 9-gauge galvanized steel tie wire in accordance with AASHTO M 279. Furnish 11-gauge; Class 1 galvanized steel hog ring fasteners in accordance with AASHTO M 279.

Furnish 9-gauge aluminum tie wire in accordance with ASTM B211 Alloy 1100, Temper H14. Furnish minimum 11-gauge aluminum hog ring fasteners in accordance with ASTM B211, Alloy 6061.

Method of Measurement. Chain Link Fence will be measured by the square feet installed and will include the fence fabric, posts, rails, braces, fabric bands, stretcher bars, tie wires, and all other materials, labor, and equipment required to complete the installation.

Basis of Payment. The basis for payment will be the actual square foot measurement of the chain link fence installed around the perimeter of the cover per approval of the Owner.

### **SP-36 ROLL UP DOOR**

Description. This item will include the roll up door, automatic door opener, wall mount door opener, 2 remote control openers, wiring for the opener, and the materials, labor, and equipment to the roll up door per each door. The size and location of the door is specified by the door opening shown on the plans. The door hardware will be attached to the steel frame shown on the contract plans. The door specifications and certifications shall be submitted and approved by the

Owner/Engineer prior to the installation. This item may be accepted or eliminated at the Owner's discretion.

The Roll Up Door may be a solid door or a grille door with a maximum of 2" grille spacing.

Method of Measurement. The method of measurement for the Roll Up Door will be per Each.

Basis of Payment. The basis of payment will be per Each Roll Up Door that is furnished and installed per manufacturer's recommendation and the approval of the Owner.

### **SP-37 CHAIN LINK GATE**

Description. This item will include the furnishing and installation with all the hardware, labor, and equipment necessary for the installation. The size and location of each gate is specified by the opening shown on the plans. The hardware will be attached to the chain link fence posts at the opening as shown on the contract plans. The gate specifications and certifications shall match the Chain Link Fence material specifications. This item may be accepted or eliminated at the Owner's discretion.

Method of Measurement. The method of measurement will be per Each gate installed.

Basis of Payment. The basis of payment will be per Each Chain Link Gate that is furnished and installed per manufacturer's recommendation and the approval of the Owner.

### **SP-38 RELOCATE UNDERGROUND ELECTRIC LINE**

Description. This item will include the relocation of an underground electrical line that connects to outlets near the raceway that will be in conflict with the installation of the drilled concrete shaft at the northeast corner of the raceway cover. The line will be dead prior to the contract being approved.

The measurement and payment will be paid per the Lump Sum bid.

**ACKNOWLEDGEMENT.** The following companies were consulted during the preliminary design phase and are familiar with the project:

Behlen Building Systems  
Doug Budahl, District Sales Manager  
2380 S. Ice Bear Way  
Meridian, ID 83642  
208-484-8669 phone  
[doug.budahl@behlenedge.com](mailto:doug.budahl@behlenedge.com)

Jares Fence Company  
Sean Zepeda  
10640 S Frontage Road  
Billings, MT 59101  
406-625-1924 phone  
[sean@jaresfence.com](mailto:sean@jaresfence.com)



# Boring Log

PROJECT: Bluewater Fish Hatchery  
Lower Raceway Roof Structure  
 CLIENT: Cal Frank  
 LOCATION: Carbon County, Montana

LOGGED BY: J. Frank  
 DRILL METHOD: Hollow Stem  
 DRILLER: R. Kukes  
 DATE: 12/13/23  
 ELEVATION: \_\_\_\_\_

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: 1	Consistency	LABORATORY TESTING				
	Sample Type	Blows / 6 in.	Soil Pattern				Water Content (%)	Plastic Index (PI)	Minus #200 (%)	Sample Recovery	
MATERIAL DESCRIPTION AND COMMENTS											
1				FILL	Fill with Vegetation - Clay, Sand, Gravel - Dark Brown, Moist, Medium Stiff						
2											
3											
4				CL	Sandy Lean Clay - Red/Brown, Moist, Medium Stiff to Soft with with Depth, Moderate Plastic Index						
5		4				F	24.7	11.9	51.2	1.5	
6		3									
7		2									
8				SC	Clayey Sand with Gravels - Brown/Red/Gray, Moist to Wet, Loose, Low/Moderate Plastic Index						
9											
10		3			Initial Groundwater Level at 9.2 Feet						
11		2			Water Perched on Shale Layer Below	L				0.8	
12		2		PCEM	Completely Weathered Shale - Dark Gray/Red/Brown, Moist/Wet, Soft, Moderate Plastic Index						
13											
14					Final Groundwater Level - 13.8						
15											
16					Boring Ends at Approximately 15.0 Feet Depth						
17					Groundwater was encountered at 9.2 feet perched on shale layer at 11.5'. Final groundwater reading at 13.8 feet after completion of drilling and penetrating shale layer.						
18											
19											
20											



# Boring Log

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Lower Raceway Roof Structure  
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LOGGED BY: J. Frank  
 DRILL METHOD: Hollow Stem  
 DRILLER: R. Kukes  
 DATE: 12/13/23  
 ELEVATION: \_\_\_\_\_

Depth (ft)	SAMPLES			USCS Symbol	BORING NUMBER: 2	Consistency	LABORATORY TESTING			
	Sample Type	Blows / 6 in.	Soil Pattern				Water Content (%)	Plastic Index (PI)	Minus #200 (%)	Sample Recovery
MATERIAL DESCRIPTION AND COMMENTS										
1				FILL	Fill with Vegetation - Clay, Sand, Gravel - Dark Brown, Moist, Medium Stiff					
2										
3										
4										
5		4		CL	Sandy Lean Clay - Brown, Moist, Medium Stiff to Soft with Depth, Moderate Plastic Index	F				1.3
6		4								
7		3								
8										
9										
10		2		SC	Clayey Sand with Gravels - Brown/Red/Gray, Moist to Wet, Loose, Low/Moderate Plastic Index	L	21.3	7.8	30.9	1.4
11		2			Initial Groundwater Level at 11.5 Feet Water Perched on Shale Layer Below					
12		2								
13		2								
14				PCEM	Completely Weathered Shale - Dark Gray/Red/Brown, Moist/Wet, Soft, Moderate Plastic Index					
15					Boring Ends at Approximately 15.0 Feet Depth Groundwater was encountered at 11.5 feet perched on shale layer at 13.0 feet.					
16										
17										
18										
19										
20										